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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,059	04/13/2001	Mark Gray	55218-0507	5951

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HICKMAN PALERMO TRUONG & BECKER, LLP  
1600 WILLOW STREET  
SAN JOSE, CA 95125

EXAMINER
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REFAI, RAMSEY

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/835,059	<b>Applicant(s)</b> GRAY, MARK	
	<b>Examiner</b> Ramsey M Refai	<b>Art Unit</b> 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 17-19, 30 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 20-29 and 31-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/09/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1 – 41 are presented for examination.

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Group 1: Claims 1-16, 20-29, and 31 – 40 are drawn to a method for determining one or more logical interconnections among a plurality of network devices that are interconnected in a network, class 709, subclass 223.
  - II. Group 2: Claims 17-19, 30, and 41 are drawn to a method for developing a representation of a network having a plurality of network devices that are interconnected in a, classified in class 709, subclass 249.
1. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as determining one or more logical interconnections among a plurality of network devices interconnected in an indefinite relationship, lacking the particulars of Invention II. Invention II allows for developing a representation of a network having a plurality of network devices interconnected in an indefinite relationship, lacking the particulars of Invention I. See MPEP § 806.05(d).
2. These inventions are distinct for the reasons given above, and the search required for

each Group is different and not co-extensive for examination purpose. For example, the searches for the two inventions would not be co-extensive because these groups would require different searches on PTO's classification class and subclass as following:

(a) the Group I search would require use of search **Class 709, subclass 223**.

(b) the Group II search would require use of search **Class 709, subclass 249**.

3. A telephone call was made to Mr. Craig Holmes, the applicant's representative, on September 23, 2004 to address a possibility of restriction requirement. The applicant chose an election of Group I, which is, claims 1-16, 20-29, and 31-40, without traverse.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. Claims 17-19, 30, and 41 are withdrawn from examination.

6. Claims 1-16, 20-29, and 31-40 are now presented for examination.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5-10, 12, 14, 16, 20-24, 27, 29, 31-35, 38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345).

9. As per claim 1, Schenkel et al teach a method for determining one or more logical interconnections among a plurality of network devices that are interconnected in a network in an indefinite relationship, wherein a power state is associated with a first network device, the method comprising the computer-implemented steps of:

changing the power state of the first network device; identifying whether an alteration occurs at a second network device in response to changing the power state of the first network device (**column 2, lines 20-40; shows a signal sent from a source device to a destination device, Figure 2, and column 3, lines 18-32**).

10. Schenkel et al fail to teach creating and storing first information representing a logical connection of the first network device to the second network device.

11. However, Kracht teaches creating and storing information representing a logical connection of the first network device to the second network device (**column 3, line 59 – column 4, line 10**). It would have been obvious to one of the ordinary skill in the art at the time of the

applicant's invention to combine the teachings of Schenkel et al and Kracht because Kracht's use of creating and storing information representing a logical connection of devices in Schenkel et al's system would have created a way to maintain information regarding neighboring devices on a database.

12. As per claim 2, Schenkel et al fail to teach retrieving second information from a database, wherein the second information represents one or more logical connections of the first network device to the second network device; comparing the second information from the database with the first information; and generating an error if the second information indicates that a logical connection exists between the first and second network devices but the first information does not indicate that the logical connection exists between the first and second network devices.

13. However, Kracht teaches a discovery mechanism that has a data file, comparing the returned sysObjectID variable to the entries within the data file, and eliminating information representing a plurality of devices that is incorrectly identified as a known device (**column 4, lines 10-21 and column 7, line 61 – column 8, line 15**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al and Kracht because Kracht's use of comparing device information in Schenkel et al's system would enhance updating device information stored in a database or data file.

14. As per claim 3, Schenkel et al teach the second network device is a terminal server (**column 2, line 65 – column 3, line 7**) and wherein the step of identifying whether the alteration occurs at the terminal server further comprises: determining whether a state of a port of the

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terminal server is dead to active in response to changing the power state of the first network device (**column 30 –37, column 6, lines 30-35, column 6, lines 55-56 and column 27, lines 55-62,**).

15. As per claim 5, Schenkel et al teach receiving, in response to changing the power state of the first network device, additional information from the first network device; and recording the additional information (**Figure 2, column 3, lines 19-32, and column 4, line 1-12**).

16. As per claim 6, the claim contains similar limitations as claim 1; therefore it is rejected under the same rationale.

17. As per claim 7, Schenkel et al teach a set of rules are applied based upon one or more attributes of each connection (**column 1, lines 27-59**).

18. As per claim 8, Schenkel et al teach one or more attributes of each connection include a type of connection between two or more network devices (**column 1, lines 41-59**).

19. As per claim 9, Schenkel et al teach one or more attributes of each connection include the number of connections between a specific network device and one or more other network devices (**column 1, lines 35-41**).

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20. As per claim 10, Schenkel et al teach one or more attributes of each connection include that a particular connection is between a first type of network device and a second type of network device (**column 1, lines 42 –45 and column 2, line 65- column 3, line 5**).

21. As per claims 12 and 16, the claims contain similar limitations as claim 1 above, therefore are rejected under the same rationale.

22. As per claim 14, the claim contains similar limitations as claim 3 above; therefore it is rejected under the same rationale.

23. As per claims 20-24, 27, 29, 31-35, 38, and 40, these claims contain similar limitations as claims 1-3, 5-10, 12, 14, and 16 above, therefore are rejected under the same rationale.

24. Claims 4, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345) and in further view of Noy (U.S. Patent No. 6,628,623).

25. As per claim 4, Schenkel et al teach the second network device and identifying whether the alteration occurs at the second network device in response to changing the power state of the first network device (**column 2, lines 20-40, Figure2, and column 3, lines 18-32**).

26. Schenkel et al and Kracht fail to teach the use of a switch and determining whether a trap on a port of the switch is raised.



27. However, Noy teaches the switch connectivity information may be acquired by setting a simple network management protocol (SNMP) trap at each switch where each switch provides information when a new MAC address becomes known to it. It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Noy because Noy's use of determining port activity on a switch in Schenkel et al-Kracht's system would enhance discovery of neighboring devices by determining if a port on a switch is raised when a signal is sent from the first device to a switch and creating and storing information regarding the devices attached to switch.

28. As per claims 11 and 15, the claims contain similar limitations as claim 4 above; therefore they are rejected under the same rationale.

29. Claims 13, 25, 26, 28, 36-37, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345) and in further view of Singh (U.S. Patent No. 5,347,167).

30. As per claim 13, Schenkel et al fail and Kracht to teach a first network device is connected to a power controller and wherein the signal from the control device is sent to the power controller that changes the power state of the first network device.

31. However, Singh teaches the use of a power controller device that power up connected computers and other peripheral devices (**Figures 1,3 and column 3, lines 20-50**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Singh because Singh's use of a power controller in Schenkel et al-Kracht's system would allow for discovery of devices by using a power controller to power up the first device and all other devices attached to the first device and then creating and storing information regarding the devices that are powered up due to the power controller.

32. As per claim 25, Schenkel et al and Kracht fail to teach changing the power state of the first network device is in response to a signal from a third network device.

33. However, Singh teaches a special key that sends a signal to change the power of a device (**column 4, lines 19-35**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Singh because Singh's use of a special key in Schenkel et al-Kracht's system would allow a user to power up a computer and other devices attached to it using a special key where information regarding these devices is then created and stored in a database.

34. As per claim 26, Schenkel et al and Kracht fail to teach the first network device is connected to a power controller and wherein the signal from the third network device is sent to the power controller that changes the power state of the first network device.

35. However, Singh teaches a power controller that sends a signal to change to the power controller device that powers a computer and all peripheral devices (**column 4, lines 19-35**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Singh because Kracht's use of creating and storing information and Singh's use of a special key in Schenkel et al's system would allow a user to power up a computer and other devices attached to it using a special key where information regarding these devices is then created and stored in a database.

36. As per claim 28, 36 –37, and 39, these claims contain similar limitations as claims 13, 25-26 above, therefore rejected under the same rationale.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Olivia et al (U.S Patent No. 6,654,802)
- b. Mattson et al (U.S Patent No. 5,983,269)
- c. Pulsipher et al (U.S Patent No. 5,948,055)
- d. Stracke, Jr. (U.S Patent No. 6,047,330)
- e. Nelson et al (U.S Patent No. 5,835,720)
- f. Rangarajan et al (U.S Patent No. 5,845,081).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey M Refai whose telephone number is (703) 605-4361

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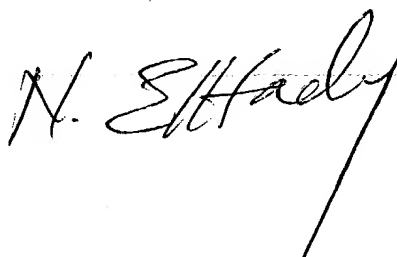
(after November 1, 2004, (571) 272-3975). The examiner can normally be reached on M-F 8:30 - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramsey M Refai  
Examiner  
Art Unit 2154

RMR  
October 5, 2004

A handwritten signature in black ink, appearing to read "N. E. Hardy", with a long diagonal stroke extending downwards and to the right.